

WHAT IS CLAIMED:

1. A process for assembling groups of filter segments in a rod process, comprising:

providing a plurality of different types of filter segments;

assembling the plurality of different types of filter segments into a group of filter segments; and

dividing the group of filter segments into at least two part groups of filter segments, wherein the filter segments of each part group adjoin each other in a lengthwise axial manner.

2. The process in accordance with claim 1, further comprising forming a multi-segment filter with at least two of the different types of filter segments.

3. The process in accordance with claim 2, wherein all filter segments of the group of filter segments are combined to form at least one multi-segment filter.

4. The process in accordance with claim 1, wherein the group of filter segments is assembled by arranging the filter segments to adjoin each other in a lengthwise axial manner; and

the at least two part groups are formed by spacing a first part of the group of filter segments adjoining in a lengthwise axial manner from a second part of the group of filter segments adjoining in a lengthwise axial manner.

5. The process in accordance with claim 4, wherein the spacing of first and second parts of the group of filter segments comprises pushing the first and second parts apart in a cross-axial manner.

6. The process in accordance with claim 4, wherein the first part group comprises different filter segments than the second part group.

7. The process in accordance with claim 1, further comprising aligning the at least two part groups crosswise to the conveying direction and aligning at least one end of the at least two part groups in the conveying direction.

8. A process for assembling groups of filter segments in a rod process, comprising:

forming a group of filter segments composed of at least two different types of filter segments; and

dividing the group of filter segments into at least two part groups arranged in series in a cross-axial conveying direction.

9. The process in accordance with claim 8, wherein the filter segments are arranged to produce multi-segment filters of the tobacco processing industry.

10. The process in accordance with claim 8, further comprising:

aligning the part groups in a lengthwise axial manner crosswise to the conveying direction; and

conveying the aligned part groups so that at least one end of the part groups is aligned in the conveying direction.

11. A process for producing multi-segment filters of the tobacco processing industry in a rod process, comprising:

providing a plurality of different types of filter segments;

assembling the plurality of different types of filter segments into a group of filter segments;

dividing the group of filter segments into at least two part groups of filter segments, wherein the filter segments of each part group adjoin each other in a lengthwise axial manner;

aligning the at least two part groups of filter segments in series in a lengthwise axial manner to form a rod;

conveying the rod in a lengthwise axial direction; and

wrapping the rod with a wrapping material.

12. The process in accordance with claim 11, further comprising severing one of multi-segment filters and multiple-length multi-segment filters from the rod.

13. The process in accordance with claim 12, wherein the part groups of filter segments are transferred from a cross-axial conveying direction to a lengthwise axial conveying direction.

14. The process in accordance with claim 12, wherein the dividing of the group of filter segments into at least two part groups occurs prior to the conveying of the rod in the lengthwise axial direction.

15. A device for assembling groups of filter segments in a rod process, comprising:

at least two units structured and arranged to provide at least two different types of filter segments;

a first assembling device structured and arranged to assemble the at least two different types of filter segments into groups; and

a separation device structured and arranged to divide the groups into part groups.

16. The device in accordance with claim 15, wherein said device is structured and arranged to produce multi-segment filters of the tobacco processing industry.

17. The device in accordance with claim 15, wherein said separation device comprises a device for moving the part groups apart from each other.

18. The device in accordance with claim 15, wherein said device comprises a staggered drum.

19. The device in accordance with claim 15, wherein said separation device further comprises a sliding drum structured and arranged to displace at least one of the part groups in a lengthwise axial manner, such that at least one end of the displaced part groups is aligned in a crosswise axial manner.

20. A cigarette production machine comprising the device in accordance with claim 15.

21. A process for producing rod-shaped articles, comprising:

providing a plurality of segments of different type;

arranging the plurality of segments of different type into groups aligned in a cross conveying direction;

separating the groups into at least two part groups; and
aligning the at least two part groups to form a rod of segments.

22. The process in accordance with claim 21, further comprising conveying at least one of the at least two part groups in the cross conveying direction.

23. The process in accordance with claim 22, further comprising conveying the at least two part groups in succession in the conveying direction.

24. The process in accordance with claim 23, wherein at least one end of the at least two part groups conveyed in the conveying direction are aligned in the conveying direction.

25. The process in accordance with claim 23, further comprising separating the at least two part groups in a conveying direction.

26. The process in accordance with claim 25, further comprising aligning the at least two part groups in an axial direction, thereby forming the rod.

27. The process in accordance with claim 26, further comprising:
conveying the rod in the axial direction;
wrapping the rod with wrapping paper; and
dividing the rod into a plurality of multi-segment rods.

28. The process in accordance with claim 21, wherein the plurality of different types of segments of different types comprise soft elements.

29. The process in accordance with claim 21, wherein the groups of segments are arranged to include two segments of each different type.

30. The process in accordance with claim 29, wherein each group includes at least one double length segment and at least two single length segments of a same type.

31. An apparatus for assembling groups of filter segments in a rod process, comprising:

a plurality of filter segment units, wherein each filter segment unit is structured and arranged to provide different types of filter segments;

an assembling device coupled to said plurality of filter segment units to axially align the produced plurality of filter segments of different types; and

a separation device coupled to said assembling device to divide the axially aligned filter segments into part groups.

32. The apparatus in accordance with claim 31, wherein said separation device comprises a staggered drum to move the part groups apart from each other.

33. The apparatus in accordance with claim 32, wherein said separation device further comprises a sliding drum structured and arranged to move at least one of the part groups in an axial direction crosswise to a conveying direction, to successively convey the part groups in the conveying direction.

34. The apparatus in accordance with claim 33, further comprising an insertion wheel and a transfer conveyor, wherein the partial groups are axially aligned on the transfer conveyor by said insertion wheel in order to form a rod.